AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1-38 (Canceled).

39. (New) A method for achieving at least a transient, localized, modulation of vascular structure and/or function, comprising:

topically administering to a patient in need of said modulation, a sufficient amount of a non-barrier forming material comprising poly-β-1→ 4 N-acetylglucosamine polymers, wherein the poly-β-1→ 4 N-acetylglucosamine polymer comprises about 50 to about 150,000 N-acetylglucosamine monosaccharides covalently attached in a β-1→ 4 conformation, so that the patient experiences at least a transient, localized modulation of vascular structure and/or function.

40. (New) The method of claim 39, wherein the method achieves at least a transient, localized physiological response comprising stimulation of endothelin-1 release.

41. (New) The method of claim 40, wherein the endothelin-1 is released from vascular endothelial cells.

42. (New) The method of claim 39, wherein the method achieves at least a transient, localized physiological response comprising vasoconstriction.

43. (New) The method of claim 39, wherein the method achieves at least a transient, localized physiological response comprising reduction in blood flow out of a breached vessel.

44. (New) The method of claim 43, wherein the patient experiences cessation of blood flow.

45. (New) The method of claim 39, wherein the poly-β-1→ 4 N-acetylglucosamine polymer comprises about 50 to about 50,000 N-acetylglucosamine monosaccharides covalently attached in a β-1→ 4 conformation.

46. (New) The method of claim 45, wherein the poly-β-1→ 4 N-

acetylglucosamine polymer comprises about 50 to about 10,000 N-acetylglucosamine monosaccharides covalently attached in a β-1→ 4 conformation.

47. (New) The method of claim 46, wherein the poly-β-1→ 4 N-acetylglucosamine polymer comprises about 50 to about 4,000 N-acetylglucosamine monosaccharides covalently attached in a β-1→ 4 conformation.

48. (New) The method of claim 39, wherein the poly-β-1→ 4 N-acetylglucosamine polymer comprises at least one non-acetylated glucosamine monosaccharide unit, and wherein at least 40% of the glucosamine monosaccharide units are N-acetylated.

49. (New) The method of claim 39, wherein the patient is a human.

50. (New) The method of claim 39, wherein the non-barrier forming material is in the form of a gel, sponge, film, membrane, foam, spray, emulsion, suspension, or solution.

51. (New) The method of claim 39, wherein the non-barrier forming material is applied directly to a blood vessel.

52. (New) The method of claim 39, wherein the vascular structure is a blood vessel selected from the group consisting of capillary, vein, and artery.

53. (New) The method of claim 52, wherein the blood vessel is a breached blood vessel.

54. (New) The method of claim 53, whereby the patient experiences cessation of bleeding.

55. (New) The method of claim 39, wherein the extent of the transient, localized modulation of vascular structure and/or function is substantially proportional to the amount of poly-β-1→ 4 N-acetylglucosamine administered.

56. (New) The method of claim 39, wherein said polymers are substantially free of protein.

57. (New) The method of claim 39, wherein said polymers are substantially free of organic contaminants.

58. (New) The method of claim 39, wherein said polymers are substantially free of inorganic contaminants.

59. (New) A method for treating a patient having a vascular disorder, comprising:

topically administering to a patient in need of such treatment, a sufficient amount of a non-barrier forming material comprising poly-β-1→ 4 N-acetylglucosamine polymers, wherein the poly-β-1→ 4 N-acetylglucosamine polymer comprises about 50 to about 150,000 N-acetylglucosamine monosaccharides covalently attached in a β-1→ 4 conformation, whereby said administering ameliorates said vascular condition.

60. (New) The method of claim 59, wherein the vascular disorder is selected from the group consisting of menorrhagia, cerebral aneurysm, abdominal aneurysm, uterine fibroid lesion, and blood vessel puncture.

61. (New) The method of claim 59, wherein said polymers are substantially free of protein.

62. (New) The method of claim 59, wherein said polymers are substantially free of organic contaminants.

63. (New) The method of claim 59, wherein said polymers are substantially free of inorganic contaminants.

64. (New) The method of claim 59, wherein the method achieves at least a transient, localized physiological response comprising stimulation of endothelin-1 release.

65. (New) The method of claim 59, wherein the method achieves at least a transient, localized physiological response comprising vasoconstriction.

66. (New) The method of claim 59, wherein the method achieves at least a transient, localized physiological response comprising reduction in blood flow out of a breached vessel.